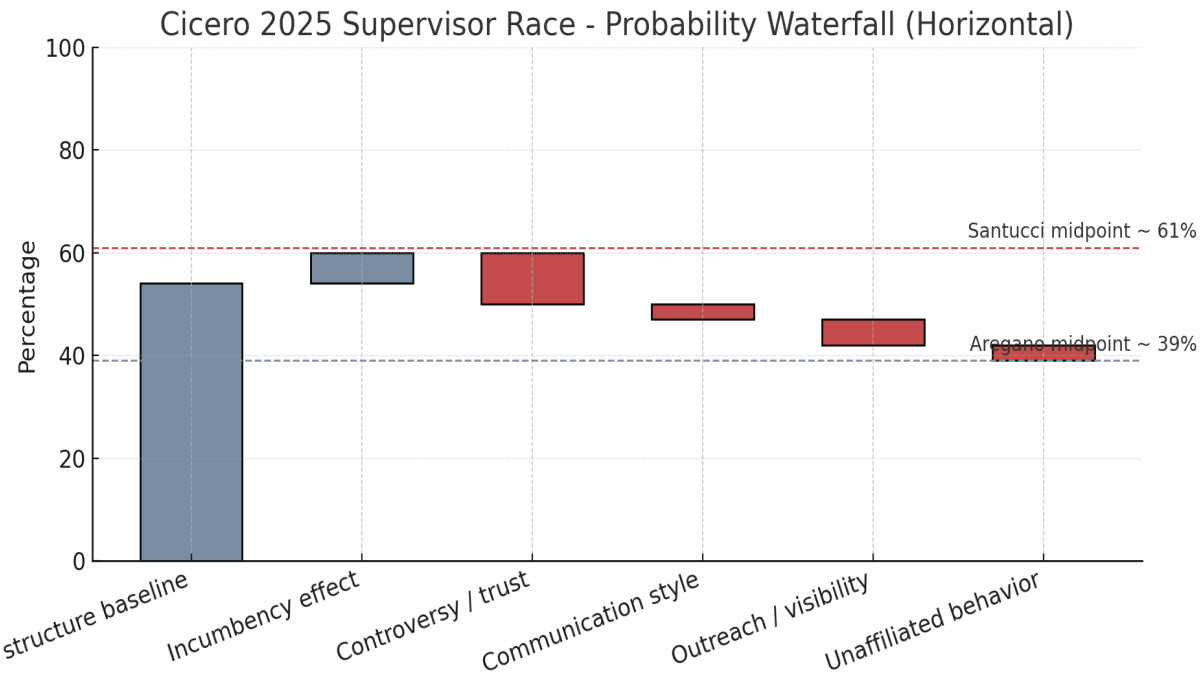
CICERO 2025 SUPERVISOR RACE - AI ASSISTED PROBABILITY DERIVATION

Visual summary: horizontal probability waterfall showing how structural and behavioral factors shift expected outcomes.



Colors: blue gray bars represent the incumbent baseline and positive adjustments; red bars indicate negative adjustments associated with controversy, communication, and challenger outreach. Dashed lines mark midpoints for Aregano and Santucci that align with the forecast ranges reported in the v13 outlook (Santucci 52 to 62 percent; Aregano 35 to 45 percent).

Note: This exhibit is a research visualization. Ranges represent plausible outcomes under typical turnout patterns.

Technical Explanation and Inputs

Framework: With no formal polling, probabilities are derived from structural enrollment, incumbency effects, outreach visibility, issue salience, and turnout behavior. A Bayesian style weighting sets a structural baseline and then applies adjustments for observed conditions in 2025.

Key inputs: Party enrollment by election district from the New York State Board of Elections; Onondaga County election books for turnout variation; qualitative engagement indicators including event counts, yard sign presence, and social media interactions; local media coverage indicating the salience of communication and trust as primary issues.

Step by step: Start from a Republican structural edge near 54 percent for the incumbent. Apply an average incumbency bump of around 6 points under typical conditions. Subtract penalties where controversy and communication are salient, approximately minus 10 and minus 3 respectively. Apply a challenger outreach and visibility adjustment around minus 5 and an Unaffiliated voter behavior adjustment around minus 3. The combined effect yields an Aregano midpoint near 39 percent and a complementary Santucci midpoint near 61 percent, consistent with the v13 forecast ranges.

Relative weights used in the model: structure 30 percent, incumbency 20 percent, outreach visibility 20 percent, issue salience and controversy 20 percent, turnout and Unaffiliated behavior 10 percent. These weights were calibrated against recent town cycles in Central New York to minimize error.

Sensitivity: Under low turnout conditions skewed to older Republican leaning districts, the incumbent could rise toward the upper 40s. Under higher turnout conditions that mobilize Unaffiliated residents in select districts, the challenger could approach the low 60s.

Sources (plain text): New York State Board of Elections Enrollment by Election District - https://www.elections.ny.gov/EnrollmentED.html ; Onondaga County Board of Elections - https://ongov.net/elections/ ; Onondaga County Election Results - https://electionresults.ongov.net/ ; Regional reporting for issue salience and board controversies.